UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,833	01/29/2004	Nicola Benvenuti	16220ROUS01U	5639

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EXAMINER
WONG, BLANCHE

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
09/10/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

john@gorecki.us

		Application No.	Applicant(s)
Office Action Summary		10/767,833	BENVENUTI ET AL.
		Examiner	Art Unit
		Blanche Wong	2616

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>29 January 2004</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-20</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>29 January 2004</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>Jan04</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show

every feature of the invention specified in the claims. Therefore, the "assessing

connection information on the protection cycle" (claim 1), "determining a protection

transmission unit allocation from said connection information" (claim 1), "distributing

connection information associated with connections on the protection cycle ot nodes on

the protection cycle" (claim 10), and "determining ... protection transmission unit

allocation on the protection cycle for the connections on the network affected by a

failure on the protection cycle according to the connection information" (claim 10) must

be shown or the feature(s) canceled from the claim(s). No new matter should be

entered.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   **Claim 2-3,6,9,16,17** are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

With regard to claim 2, it is unclear what is A/Z information.

4.   There is insufficient antecedent basis for this limitation in the claim.

Claim 6, line 1, "the protection transmission".

Claim 9, line 1, "p-cycle".

Claims 16 and 17, both in line 2, "p-cycle".

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6.   **Claim 18-20** are rejected under 35 U.S.C. 101 because control logic is a non-statutory subject matter. Examiner interprets control logic as instructions to enable the node to implement the functions and these instructions are computer code/program/software. A computer program is purely an abstract idea whereas e.g. a computer readable medium storing a computer program with instructions, supports a statutory/hardware system.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   **Claims 1-8,10-15** are rejected under 35 U.S.C. 102(b) as being anticipated by Lu (U.S. Pat No. 5,412,652).

With regard to claim 1, Lu discloses SONET ring management comprising the steps of:

assessing connection information **(use of the SONET ring table)** on the

protection cycle **(protection channels)** (**"... the protection channels to carry extra**

traffic ... through the use of the SONET ring table ... only a minimum number of

protection channels is necessary to restore the normal traffic", col. 12, line 68 –

col. 13, line 8);

determining a protection transmission unit allocation **(carry extra traffic)** from

said connection information **(use of the SONET ring table)** (**"... the protection**

channels to carry extra traffic ... through the use of the SONET ring table ... only

a minimum number of protection channels is necessary to restore the normal

traffic", col. 12, line 68 – col. 13, line 8) (*See also* **"... prior to a failure, all**

protection channels ... are most likely in a default status", col. 12, lines 44-46).

With regard to claim 2 and 3, Lu further discloses connection ID information **(ring**

path ID, col. 9, line 24).

With regard to claim 4, Lu further discloses the protection cycle is a ring on the

communication network **(ring, col. 5, line 59)** (*See also* **BLSR type SONET ring in**

Fig. 5, col. 8, line 25) and determining connections affected by a failure (**"When an**

optical cable has been cut or a node has failed ...", col. 12, line 47) on the ring

(self-healing) (*See also* **"the ring table provides the necessary intelligence for the**

individual network elements and is used by the network elements for decision

making processes in, for example, autoprovisioning and self-healing operations

...", col. 5, lines 63-67).

With regard to claim 5, Lu further discloses receiving notice **(loop back)** of a failure on the ring (**"When an optical cable has been cut or a node has failed, the working channels are looped back using the protection channels to restore the traffic"**, col. 12, lines 47-49).

With regard to claim 6, Lu further discloses a unit of bandwidth **(transmission building blocks of 51.84 Mbps, col. 1, lines 40-41)**.

With regard to claim 7, Lu further discloses an optical transport technology **(SONET) (BLSR type SONET ring in Fig. 5, col. 8, line 25)** and determining transmission times **(Mbps) (transmission building blocks of 51.84 Mbps, col. 1, lines 40-41)** for connections according to the connection information **(autoprovisioning)** (*See also* **"the ring table provides the necessary intelligence for the individual network elements and is used by the network elements for decision making processes in, for example, autoprovisioning and self-healing operations ..."**, col. 5,lines 63-67).

With regard to claim 8, Lu further discloses the protection cycle is a ring on the communication network **(ring, col. 5, line 59)** (*See also* **BLSR type SONET ring in Fig. 5, col. 8, line 25)** and wherein the method is performed by each node on the ring **(individual network elements)** (**"the ring table provides the necessary intelligence for the individual network elements and is used by the network elements for**

decision making processes in, for example, autoprovisioning and self-healing

operations ...", col. 5,lines 63-67).

With regard to claim 10, Lu discloses SONET ring management comprising the

steps of:

distributing **(provides)** connection information **(ring table)** associated with

connections on the protection cycle to nodes **(individual network elements)** (**"the**

ring table provides the necessary intelligence for the individual network elements

and is used by the network elements for decision making processes in, for

example, autoprovisioning and self-healing operations ...", col. 5, lines 63-67) on

the protection cycle **(protection channels in Fig. 5)**; and

determining, by the nodes **(nodes in Fig. 5)** on the protection cycle **(protection**

channels in Fig. 5), protection transmission unit allocation **(when not carrying extra**

traffic) on the protection cycle **(protection channels)** for the connections on the

network affected by a failure **(when the protection channels are not carrying extra**

traffic, it is inherent that there is a failure in the system and the protection

channels are used to restore the system) on the protection cycle according to the

connection information **(use of the SONET ring table)** ("... the protection channels

to carry extra traffic ... through the use of the SONET ring table ... only a

minimum number of protection.channels is necessary to restore the normal

traffic", col. 12, line 68 – col. 13, line 8) (*See also* "... prior to a failure, all

protection channels ... are most likely in a default status", col. 12, lines 44-46).

With regard to claim 11, Lu further discloses the protection cycle is a ring **(ring, col. 5, line 59) (*See also* BLSR type SONET ring in Fig. 5, col. 8, line 25)**, and wherein the nodes are nodes on the ring **(See Fig. 5)**, and wherein the connections are connections that are provisioned through at least two nodes on the ring **(each path has a starting or source node and the ending or destination node, col. 9, lines 29-30)**.

With regard to claim 12, Lu further discloses a SONET based network **(SONET) (BLSR type SONET ring in Fig. 5, col. 8, line 25)**, wherein the protection cycle is a SONET ring **(SONET ring) (BLSR type SONET ring in Fig. 5, col. 8, line 25)**, and wherein the protection transmission unit allocation is a time slot **(time slot) (TSI, col. 12, line 11)** on the ring.

With regard to claim 13, Lu further discloses the protection cycle **(CW/CCW)** has a working path and a protection path **(CW/CCW protection channels 7-12 for working channels 1-6, col. 8, lines 44-49)**, wherein connections are transmitted in time slots on the working path, and wherein the protection transmission units are time slots **(time slots)** on the protection path **(time slot) (TSI, col. 12, line 11) (it is inherent that the time slots are on the respective paths)**.

With regard to claim 14, Lu further discloses the protection cycle has two **(CW/CCW)** working paths and two **(CW/CCW)** protection path **(CW/CCW protection channels 7-12 for working channels 1-6, col. 8, lines 44-49)**, wherein time slot interchange **(TSI, col. 12, line 11) (it is inherent that the time slots are on the**

respective paths) is permitted on the working path **(working channels)**, and wherein

time slots **(time slot) (TSI, col. 12, line 11) (it is inherent that the time slots are on**

the respective paths) are allocated on the protection path **(protection channels)**.

With regard to claim 15, Lu further discloses extra traffic **(extra traffic)** may be

carried on the protection path **("... the protection channels to carry extra traffic ...**

through the use of the SONET ring table ... only a minimum number of protection

channels is necessary to restore the normal traffic", col. 12, line 68 – col. 13, line

8), and time slot interchange **(TSI, col. 12, line 11) (it is inherent that the time slots**

are on the respective paths) is permitted for extra traffic on the protection path.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter. as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   **Claims 9,16,17** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lu in view of Afferton et al. (U.S. Pat No. 6,278,689).

With regard to claim 9, Lu discloses the method of claim 1. Lu further discloses

p-cycle **(protection channels 7-12 for working channels 1-6, col. 8, lines 44-49).**

However, Lu fails to explicitly show a mesh network.

Afferton discloses a mesh network **(cross-connect mesh network, col. 1, line 64)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine a mesh network as taught by Afferton, with Lu, in order to prevent double ring failure which is generally not restorable via the ring itself, giving rise to a service outage which is costly from both a revenue and customer satisfaction perspective. Afferton, col. 1, line 46-48.

With regard to claim 16, Lu discloses the method of claim 10. Lu further discloses p-cycle **(protection channels 7-12 for working channels 1-6, col. 8, lines 44-49)**. However, Lu fails to explicitly show a mesh network.

Afferton discloses a mesh network **(cross-connect mesh network, col. 1, line 64)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine a mesh network as taught by Afferton, with Lu, in order to prevent double ring failure which is generally not restorable via the ring itself, giving rise to a service outage which is costly from both a revenue and customer satisfaction perspective. Afferton, col. 1, line 46-48.

With regard to claim 17, Lu and Afferton discloses the method of claim 17. Lu further discloses the connection information **(ring table)** for connections protected by the p-cycle **(protection channels)** ("**... the protection channels to carry extra traffic ... through the use of the SONET ring table ... only a minimum number of**

protection channels is necessary to restore the normal traffic", col. 12, line 68 –

col. 13, line 8) is disseminated to nodes (provides ... for individual network

elements) on the p-cycle (self-healing operations) ("the ring table provides the

necessary intelligence for the individual network elements and is used by the

network elements for decision making processes in, for example,

autoprovisioning and self-healing operations ...", col. 5, lines 63-67).

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RW

BW
September 3, 2007

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SUPERVISORY PATENT EXAMINER